

ABSTRACT

Determination of Mask Fitting Pressure and Correct Mask Fit

CPAP treatment apparatus (10), as one form of positive pressure ventilatory assistance, is disclosed. A turbine/blower (14), operated by a mechanically coupled electrical motor (16), receives air or breathable gas at an inlet (18) thereof, and supplies the breathable gas at a delivery pressure to a delivery tube/hose (20) having connection at the other end thereof with a nose mask (12). A microcontroller (38) has an operational "Mask-Fit" mode. An initial constant pressure level is applied by the blower (14) to the mask (12). If the functional mode is a Manual mode, then the mask-fit test pressure is the current 'set' pressure. If the functional mode is the Automatic Titration mode, the mask-fit test pressure is the 95th percentile pressure of the previous session, otherwise it is the base treatment pressure, e.g. 10-12 cm H₂O. This constant pressure is applied for a period of time, typically 1-3 minutes. The microcontroller (38) continuously determines mask leak as the value, f_{LEAK} , from a flow sensor (32), comparing this to a threshold, and providing the patient with a visual indication of degree of leak. In this way the patient can manipulate the mask to ensure correct fitting as indicated by the appropriate message or indication.

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